

FROM SUGHRUE MION PLLC DC

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PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q670'8

Hisato NAGASE, et al.

Appln. No.: 09/987,082

Group Art Unit: 1774

Confirmation No.: 6582

Examiner: Bruce H. Hess

Filed: November 13, 2001

For: HEAT-SENSITIVE RECORDING MATERIAL

DECLARATION UNDER 37 C.F.R. § 1.132

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

I, Hisato Nagase, hereby declare and state:

THAT I am a citizen of Japan;

THAT I graduated from Graduate School of Kyoto University in March, 1998, and my major was Synthetic and Biological Chemistry;

THAT I joined Fuji Photo Film Co., Ltd., in April, 1998, and since then I have been working in the Fujinomiya Research Laboratory of the company and have been engaged in synthesis of materials for full-color heat sensitive recording materials;

THAT I am an inventor of the invention described and claimed in the above-identified application;

THAT I am familiar with the prosecution of the above-captioned application; and

THAT the experimentation set forth below was conducted by me or under my direct supervision.

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### EXPERIMENTATION

Sato et al (JP 60-089391) discloses a heat-sensitive recording material wherein the diazo compound is not encapsulated in microcapsules but is simply dispersed in the material. However, the instant invention is directed to a heat-sensitive recording material wherein the diazo compound is encapsulated in microcapsules. The instant invention provides a heat-sensitive material which is excellent in photo-fixing property and which has low color formation in background area.

Heat-sensitive recording materials exemplified in Examples 1 and 2 of the instant invention were compared with a heat-sensitive material prepared according to Example 1 of Sato (JP 60-089391). In the examples of the instant invention, density of yellow is measured since yellow color is developed, while in the comparative example (Sato), density of blue is measured since blue color is developed.

	Color-formation test		Photo-fixing property test	
	Density of formed color	Density of background	Density of formed color	Density of background
Example 1 of the instant invention	1.52	0.08	0.15	0.08
Example 2 of the instant invention	1.52	0.08	0.15	0.08
Comparative Example (Sato)	1.08	0.21	0.55	0.21

As is shown in the above table, the examples of the instant invention wherein the diazo compounds were encapsulated in microcapsules exhibit, compared with comparative example (Sato), a lower color formation in background area (lower fogging in the background area) and a

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lower density of the color which was formed after photo fixing, i.e., more excellent photo-fixing property. It is noted that the comparative example wherein the diazonium salt is dispersed exhibits poor photo-fixing property. A higher density of the color which was formed after photo-fixing is observed.

Thus, I conclude that the present invention provides unexpectedly superior results.

I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: June 23, 2003

Hisato Nagase  
Hisato Nagase